AMENDMENTS TO THE SPECIFICATION AND ABSTRACT

Please replace the paragraph beginning at page 3, line 25, with the following rewritten paragraph:

According to the present invention, there is provided a method of determining radioactive nuclides comprising:

inputting a data of pulses incident to an α-ray dectector in a computer;

obtaining and plotting a time distribution of the incident pulses by using a very short time measuring timer;

obtaining from the plotted time distribution of the incident pulses, the following whole generating probability P(t) dt from a parent nuclide to a disintegrated product thereof by fitting the linear originated in a random event corresponding to the background and the non-linear originated in correlated event of the parent nuclide-disintegrated product by using least squares method

$P(t)\, \underline{dt} = \{ \alpha_t \cdot \exp(-\lambda t) \cdot \lambda + C\}\, dt$

wherein,

P(t) dt: the probability of starting from an optional pulse and expiring at the event within a very short time dt after t milliseconds,

λ dt: the probability of generating the correlated events within a very short time dt after t milliseconds,

C dt: the probability of generating the random events within a very short time dt after t milliseconds,

α_t: the probability that the events are caused by the correlated events;

subtracting the random events portion from the P(t) to thereby extract the correlated events portion; and

dividing the extracted correlated events portion by the measured time, the amount of supplied sample and the counting efficiency to thereby obtain the radioactivity per unit.

Please replace the paragraph beginning at page 7, line 21, as previously amended in the Response filed March 28, 2006, with the following rewritten paragraph:

Now, the whole generating probability P (t) dt becomes as follows:

$$P(t)\,dt = P_A(t)dt + P_B(t)dt + P_C(t)dt + P_D(t)dt$$

$$= \Sigma (C \cdot t)^N/N!\ \exp(-Ct) \cdot [\alpha_t \exp(-\lambda t) \cdot \lambda + C]\ dt$$

and, since the following equation

$$(C \cdot t)^N/N! = \exp(Ct)$$

is obtained by the Maclaurin's expansion, the probability of the correlated events from the whole parent nuclides to the disintegrated progenies thereof becomes as follows:

$$P(t)\,dt = \{\alpha_t \cdot \exp(-\lambda t) \cdot \lambda + C\}\ dt.$$

Please replace the paragraph beginning at page 8, line 10, as previously amended in the Response filed March 28, 2006, with the following rewritten paragraph:

Conversely speaking, as being understood from the foregoing, the P(t) dt is obtained from the time distribution of the plotted incident pulses, by fitting the linear originated in the random events corresponding to the background and the non-linear originated in the correlated events of parent nuclide-disintegrated progenies by using least squares method:

$$P(t)\,dt = \{\alpha_t \cdot \exp(-\lambda t) \cdot \lambda + C\}\ dt.$$

The random events portion is then subtracted from the P(t) dt to thereby extract the correlated events portion from the parent nuclide to the disintegrated products thereof.